



X denotes a methyne group substituted by a cyano group or a nitrogen atom,

A denotes a 1,1- or 1,2-vinylene group which may be substituted in each case by one or two methyl groups or by a trifluoromethyl group,

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an ethynylene group or

a 1,3-butadien-1,4-ylene group optionally substituted by a methyl or trifluoromethyl group,

10 B denotes an alkylene or -CO-alkylene group wherein the alkylene moiety in each case contains 1 to 4 carbon atoms, while the linking of the -CO-alkylene group to the adjacent group A in each case must take place via the carbonyl group,

a -CO-O-alkylene- or -CO-NR<sub>4</sub>-alkylene group wherein the alkylene moiety in each case  
15 contains 1 to 4 carbon atoms, while the linking to the adjacent group A in each case must take place via the carbonyl group, wherein

R<sub>4</sub> denotes a hydrogen atom or a methyl or ethyl group,

20 or a carbonyl group,

C denotes a 2-oxo-morpholin-4-yl group substituted by the group R<sub>5</sub> or by the group R<sub>5</sub> and a C<sub>1-4</sub>-alkyl group, while

25 R<sub>5</sub> denotes a C<sub>3-4</sub>-alkyl, hydroxy-C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy-C<sub>1-4</sub>-alkyl, di-(C<sub>1-4</sub>-alkyl)-amino-C<sub>1-4</sub>-alkyl, pyrrolidino-C<sub>1-4</sub>-alkyl, piperidino-C<sub>1-4</sub>-alkyl, morpholino-C<sub>1-4</sub>-alkyl, 4-(C<sub>1-4</sub>-alkyl)-piperazino-C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkylsulphanyl-C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkylsulphinyl-C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkylsulphonyl-C<sub>1-4</sub>-alkyl, cyano-C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxycarbonyl-C<sub>1-4</sub>-alkyl, aminocarbonyl-C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkyl-aminocarbonyl-C<sub>1-4</sub>-alkyl, di-(C<sub>1-4</sub>-alkyl)aminocarbonyl-C<sub>1-4</sub>-alkyl, pyrrolidinocarbonyl-C<sub>1-4</sub>-alkyl, piperidinocarbonyl-  
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C<sub>1-4</sub>-alkyl, morpholinocarbonyl-C<sub>1-4</sub>-alkyl or a 4-(C<sub>1-4</sub>-alkyl)-piperazinocarbonyl-C<sub>1-4</sub>-alkyl group,

- 5 a 2-oxo-morpholin-4-yl group substituted by two groups R<sub>5</sub>, where R<sub>5</sub> is as hereinbefore defined and the two groups R<sub>5</sub> may be identical or different,

- 10 a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a -(CH<sub>2</sub>)<sub>m</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>-CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>-Y-CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-Y-CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>- bridge optionally substituted by one or two C<sub>1-2</sub>-alkyl groups, while

m denotes the number 2, 3, 4, 5 or 6 and

Y denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or C<sub>1-4</sub>-alkylimino group,

- 15 a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a -(CH<sub>2</sub>)<sub>m</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-Y-CH<sub>2</sub>-bridge, while

Y is as hereinbefore defined and

- 20 n denotes the number 2, 3 or 4,

or, if D together with E denotes a group R<sub>d</sub>, it may also denote a 2-oxo-morpholin-4-yl group which may be substituted by 1 to 4 C<sub>1-2</sub>-alkyl groups,

- 25 D denotes a -O-C<sub>1-6</sub>-alkylene group, while the alkylene moiety is linked to the group E, or

an oxygen atom, while this may not be linked to a nitrogen atom of the group E, and

- 30 E denotes an amino group substituted by 2 C<sub>1-4</sub>-alkyl groups, wherein the alkyl groups may be identical or different and each alkyl moiety may be substituted from the 2 position by a C<sub>1-4</sub>-alkoxy or di-(C<sub>1-4</sub>-alkyl)-amino group or by a 4- to 7-membered alkyleneimino group,

while in the abovementioned 6- to 7-membered alkyleneimino groups in each case a methylene group may be replaced in the 4 position by an oxygen or sulphur atom or by a sulphinyl, sulphonyl- or N-(C<sub>1-4</sub>-alkyl)-imino group,

5 a 4- to 7-membered alkyleneimino group optionally substituted by 1 to 4 methyl groups,

a 6- to 7-membered alkyleneimino group optionally substituted by 1 or 2 methyl groups, wherein in each case a methylene group in the 4 position is replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl- or N-(C<sub>1-4</sub>-alkyl)-imino group,

10 an imidazolyl group optionally substituted by 1 to 3 methyl groups,

a C<sub>5-7</sub>-cycloalkyl group, wherein a methylene group is replaced by an oxygen or sulphur atom or by a sulphinyl, sulphonyl or N-(C<sub>1-4</sub>-alkyl)-imino group, or

15 D together with E denotes a hydrogen atom,

a C<sub>1-6</sub>-alkoxy group optionally substituted from the 2 position by a hydroxy- or C<sub>1-4</sub>-alkoxy group,

20 a C<sub>3-7</sub>-cycloalkoxy- or C<sub>3-7</sub>-cycloalkyl-C<sub>1-4</sub>-alkoxy group,

or a group R<sub>d</sub>, where

25 R<sub>d</sub> denotes a C<sub>2-6</sub>-alkoxy group which is substituted from the 2 position by a C<sub>4-7</sub>-cycloalkoxy- or C<sub>3-7</sub>-cycloalkyl-C<sub>1-3</sub>-alkoxy group,

a C<sub>4-7</sub>-cycloalkoxy- or C<sub>3-7</sub>-cycloalkyl-C<sub>1-6</sub>-alkoxy group wherein the cycloalkyl moiety in each case is substituted by a C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, di-(C<sub>1-4</sub>-alkyl)-amino, pyrrolidino, 30 piperidino, morpholino, piperazino, 4-(C<sub>1-2</sub>-alkyl)-piperazino, C<sub>1-4</sub>-alkoxy-C<sub>1-2</sub>-alkyl, di-(C<sub>1-4</sub>-alkyl)-amino-C<sub>1-2</sub>-alkyl, pyrrolidino-C<sub>1-2</sub>-alkyl, piperidino-C<sub>1-2</sub>-alkyl, morpholino-

C<sub>1-2</sub>-alkyl, piperazino-C<sub>1-2</sub>-alkyl- or 4-(C<sub>1-2</sub>-alkyl)-piperazino-C<sub>1-2</sub>-alkyl group, while the abovementioned cycloalkyl moieties may additionally be substituted by a methyl or ethyl group,

- 5 while, unless otherwise stated, by the aryl moieties mentioned in the definition of the abovementioned groups is meant a phenyl group which may be mono- or disubstituted by R<sub>6</sub>, while the substituents may be identical or different and

R<sub>6</sub> denotes a fluorine, chlorine, bromine or iodine atom, a C<sub>1-2</sub>-alkyl, trifluoromethyl or C<sub>1-2</sub>-alkoxy group, or

two groups R<sub>6</sub>, if they are bound to adjacent carbon atoms, together represent a C<sub>3-4</sub>-alkylene, methylenedioxy or 1,3-butadien-1,4-ylene group,

- 15 or a tautomer or salt thereof.

2. A compound of the formula I according to claim 1, wherein

R<sub>a</sub> denotes a hydrogen atom,

- 20 R<sub>b</sub> denotes a benzyl or 1-phenylethyl group or a phenyl group substituted by the groups R<sub>1</sub> and R<sub>2</sub>, while

- R<sub>1</sub> denotes a hydrogen, fluorine, chlorine or bromine atom, a methyl, trifluoromethyl, cyano or ethynyl group and

R<sub>2</sub> denotes a hydrogen or fluorine atom,

R<sub>c</sub> denotes a hydrogen atom,

- 30 X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

B denotes a C<sub>1.4</sub>-alkylene group,

- 5 C denotes a 2-oxo-morpholin-4-yl group substituted by the group R<sub>5</sub> or by the group R<sub>5</sub> and a C<sub>1.4</sub>-alkyl group, while

R<sub>5</sub> denotes a C<sub>3.4</sub>-alkyl, C<sub>1.2</sub>-alkoxy-C<sub>1.4</sub>-alkyl, di-(C<sub>1.2</sub>-alkyl)-amino-C<sub>1.4</sub>-alkyl, pyrrolidino-C<sub>1.4</sub>-alkyl, piperidino-C<sub>1.4</sub>-alkyl, morpholino-C<sub>1.4</sub>-alkyl, 4-(C<sub>1.2</sub>-alkyl)-piperazino-C<sub>1.4</sub>-alkyl, C<sub>1.2</sub>-alkylsulphanyl-C<sub>1.4</sub>-alkyl, C<sub>1.2</sub>-alkylsulphinyl-C<sub>1.4</sub>-alkyl, C<sub>1.2</sub>-alkylsulphonyl-C<sub>1.4</sub>-alkyl, cyano-C<sub>1.4</sub>-alkyl, C<sub>1.2</sub>-alkoxycarbonyl-C<sub>1.4</sub>-alkyl, aminocarbonyl-C<sub>1.4</sub>-alkyl, C<sub>1.2</sub>-alkyl-aminocarbonyl-C<sub>1.4</sub>-alkyl, di-(C<sub>1.2</sub>-alkyl)-aminocarbonyl-C<sub>1.4</sub>-alkyl, pyrrolidinocarbonyl-C<sub>1.4</sub>-alkyl, piperidinocarbonyl-C<sub>1.4</sub>-alkyl, morpholinocarbonyl-C<sub>1.4</sub>-alkyl- or a 4-(C<sub>1.2</sub>-alkyl)-piperazinocarbonyl-C<sub>1.4</sub>-alkyl group,

- 15 a 2-oxo-morpholin-4-yl group substituted by two groups R<sub>5</sub>, while R<sub>5</sub> is as hereinbefore defined and the two groups R<sub>5</sub> may be identical or different,

- 20 a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a -(CH<sub>2</sub>)<sub>m</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>-CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-Y-CH<sub>2</sub>CH<sub>2</sub>-bridge, while

m denotes the number 2, 3, 4 or 5 and

Y denotes an oxygen or sulphur atom, a sulphinyl, sulphonyl or C<sub>1.2</sub>-alkylimino group,

- 25 a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a -(CH<sub>2</sub>)<sub>n</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>, -CH<sub>2</sub>-Y-CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-Y-CH<sub>2</sub>-bridge, where

- 30 Y is as hereinbefore defined and  
n denotes the number 2, 3 or 4,

or, if D together with E denotes a group  $R_d$ , it may also denote a 2-oxo-morpholin-4-yl group which may be substituted by 1 or 2 methyl or ethyl groups,

5 D denotes a  $-O-C_{1-4}$ -alkylene group, while the alkylene moiety is linked to the group E, and

E denotes a dimethylamino, diethylamino, pyrrolidino, piperidino, morpholino, 4-methyl-piperazino- or 4-ethyl-piperazino group or

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D together with E denotes a hydrogen atom,

a methoxy, ethoxy, 2-methoxy-ethoxy, 3-methoxy-propyloxy, tetrahydrofuran-3-yloxy, tetrahydropyran-3-yloxy, tetrahydropyran-4-yloxy, tetrahydrofuran-ylmethoxy or

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tetrahydropyran-ylmethoxy group,

a cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy or cyclohexylmethoxy group or

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a group  $R_d$ , where

$R_d$  denotes a 2-(cyclobutyloxy)-ethoxy, 2-(cyclopentyloxy)-ethoxy, 2-(cyclopropylmethoxy)-ethoxy or 2-(cyclobutylmethoxy)-ethoxy group,

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or a tautomer or salt thereof.

3. A compound of the formula I according to claim 1, wherein

$R_a$  denotes a hydrogen atom,

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R<sub>b</sub> denotes a 1-phenylethyl, 3-methylphenyl, 3-chlorophenyl, 3-bromophenyl- or 3-chloro-4-fluorophenyl group,

R<sub>c</sub> denotes a hydrogen atom,

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X denotes a nitrogen atom,

A denotes a 1,2-vinylene group,

10 B denotes a methylene group,

C denotes a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, dimethylaminomethyl, dimethylaminoethyl, diethylaminomethyl, diethylaminoethyl, cyanomethyl or cyanoethyl group,

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a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a -CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>-O-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>-NCH<sub>3</sub>-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>-NC<sub>2</sub>H<sub>5</sub>-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>-O-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>-NCH<sub>3</sub>-CH<sub>2</sub>CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-NC<sub>2</sub>H<sub>5</sub>-CH<sub>2</sub>CH<sub>2</sub>- bridge,

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a 2-oxo-morpholin-4-yl group, wherein a hydrogen atom in the 5 position together with a hydrogen atom in the 6 position is replaced by a -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>-O-CH<sub>2</sub>, -CH<sub>2</sub>-NCH<sub>3</sub>-CH<sub>2</sub>, -CH<sub>2</sub>-NC<sub>2</sub>H<sub>5</sub>-CH<sub>2</sub>, -CH<sub>2</sub>-O-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>-NCH<sub>3</sub>-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>-NC<sub>2</sub>H<sub>5</sub>-CH<sub>2</sub>CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>-O-CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>-NCH<sub>3</sub>-CH<sub>2</sub>- or -CH<sub>2</sub>CH<sub>2</sub>-NC<sub>2</sub>H<sub>5</sub>-CH<sub>2</sub>- bridge,

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or, if D together with E denotes a group R<sub>d</sub>, it may also denote a 2-oxo-morpholin-4-yl group which is substituted by 1 or 2 methyl groups, and

30 D together with E denotes a hydrogen atom,



a methoxy, ethoxy, 2-methoxy-ethoxy, 3-methoxy-propyloxy, tetrahydrofuran-3-yloxy, tetrahydropyran-4-yloxy or tetrahydrofuranymethoxy group,

5 a cyclobutyloxy, cyclopentyloxy, cyclopropylmethoxy, cyclobutylmethoxy or cyclopentylmethoxy group or

a group  $R_d$ , where

10  $R_d$  denotes a 2-(cyclobutyloxy)-ethoxy, 2-(cyclopentyloxy)-ethoxy, 2-(cyclopropylmethoxy)-ethoxy or 2-(cyclobutylmethoxy)-ethoxy group,

or a tautomer or salt thereof.

15 4. A compound of the formula I according to claim 1, wherein

$R_a$  denotes a hydrogen atom,

$R_b$  denotes a 3-chloro-4-fluorophenyl group,

20  $R_c$  denotes a hydrogen atom,

X denotes a nitrogen atom,

25 A denotes a 1,2-vinylene group,

B denotes a methylene group,

C denotes a 2-oxo-morpholin-4-yl group which is substituted by a methoxymethyl or methoxyethyl group, or

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a 2-oxo-morpholin-4-yl group, wherein the two hydrogen atoms of a methylene group are replaced by a  $-\text{CH}_2\text{CH}_2-\text{O}-\text{CH}_2\text{CH}_2-$  bridge, and

D together with E denotes a hydrogen atom, a methoxy or cyclopropylmethoxy group,

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or a tautomer or salt thereof.

5. A compound selected from the group consisting of:

10 (1) 4-[(3-chloro-4-fluoro-phenyl)amino]-6-[[4-((*R*)-2-methoxymethyl-6-oxo-morpholin-4-yl)-1-oxo-2-buten-1-yl]amino]-7-cyclopropylmethoxy-quinazoline,

(2) 4-[(3-chloro-4-fluoro-phenyl)amino]-6-[[4-(2-oxo-1,9-dioxo-4-aza-spiro[5.5]undec-4-yl)-1-oxo-2-buten-1-yl]amino]-7-cyclopropylmethoxy-quinazoline and

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(3) 4-[(3-chloro-4-fluoro-phenyl)amino]-6-([4-[2-(2-methoxy-ethyl)-6-oxo-morpholin-4-yl]-1-oxo-2-buten-1-yl]amino)-7-cyclopropylmethoxy-quinazoline,

or a tautomer or salt thereof.

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6. A physiologically acceptable salt of a compound according to claim 1, 2, 3, 4 or 5, formed with an inorganic or organic acid or base.

7. A pharmaceutical composition comprising a compound according to claim 1, 2, 3, 4 or 5  
25 or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier or diluent.

8. A method of treating a benign or malignant tumour, a disease of the respiratory tract or lungs, polyps, a disease of the gastro-intestinal tract, bile duct or gall bladder, a disease of  
30 the kidneys or of the skin, which comprises administering a therapeutically effective

amount of a compound according claim 1, 2, 3, 4 or 5 or a pharmaceutically acceptable salt thereof.

**CONCLUSIONS**